

Claims

1. A press section in a paper or board machine, in which press section the transfer of a web (W) is accomplished as a closed draw through the press section and which press section is provided with at least three separate press nips (N1, N2, N3), dewatering in the first nip (N1) of said nips taking place on two sides, **characterized** in that the closed draw of the web (W) through the press section is accomplished as a substantially straight run and that the press nips each have their own fabric loops (20, 21; 30, 31; 40, 41), that the nips (N2, N3) following after the first nip (N1) have one water-receiving fabric (30, 40), which is placed in the nip (N2, N3) on the opposite side of the web (W) with respect to the other nip in the running direction of the web in the machine.
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2. A press section as claimed in claim 1, **characterized** in that the press section is arranged to be used at running speeds over 1800 m/min.
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3. A press section as claimed in claim 1, **characterized** in that the press section is arranged to be used at running speeds over 2000 m/min.
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4. A press section as claimed in claim 1 or 2, **characterized** in that the first press nip (N1) is a roll nip (22, 23) or a press suction roll nip.
5. A press section as claimed in claim 1 or 2, **characterized** in that the first press nip (N1) is an extended nip or an extended/suction roll nip.
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6. A press section as claimed in claim 1 or 2, **characterized** in that all the nips (N1, N2, N3) are extended nips.
7. A press section as claimed in any one of claims 1 to 6, **characterized** in that in the nips (N2, N3) following after the first nip (N1), in so-called smoothing or evening out nips, the surface of the web (W) on the side opposite to the water-
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receiving fabric (30, 40) is arranged to be smoothed either against a smooth roll (32) or against a transfer belt (31, 41).

8. A press section as claimed in any one of claims 1 to 6, **characterized** in that
5 after the first nip (N1) the press section comprises an extended nip (N2) and two
smoothing nips (N3, N4).

9. A press section as claimed in claim 7 or 8, **characterized** in that at least one of
the rolls in the first two nips (N1, N2) is an extended nip roll.

10. A press section as claimed in claim 8, **characterized** in that the nips (N1, N2,
N3, N4) of the press section are all roll nips.

11. A press section as claimed in any one of claims 7 to 10, **characterized** in that
15 a press roll (33, 42, 73) in a smoothing/evening out nip (N2; N3; N4) is a press
suction roll manufactured by means of powder metallurgy.

12. A press section as claimed in any one of claims 1 to 11, **characterized** in that
a press roll (22) in a press nip (N1) is a press suction roll manufactured by means
20 of powder metallurgy.

13. A press section as claimed in any one of claims 1 to 11, **characterized** in that
at least one of the rolls in the press nips (N1, N2, N3, N4) is a press suction roll.

25 14. A press section as claimed in any one of claims 1 to 9 or 11 to 12,
characterized in that at least one of the nips following after the first nip (N1) is
an extended nip, i.e. a shoe press nip.

30 15. A press section as claimed in any one of the preceding claims, **characterized**
in that after the first nip (N1) the web (W) is arranged to be transferred from the

surface of an upper fabric (20) of the first nip (N1) onto a subsequent lower fabric/felt (30) of the press.

16. A press section as claimed in any one of the preceding claims, **characterized** in that in the second press nip (N2) dewatering is downwards and the upper surface of the web (W) is either against a smooth roll (43) or against a smooth transfer belt (41) and that in the third nip (N3) dewatering is upwards and the lower surface of the web (W) is against a transfer belt (41).
- 10 17. A press section as claimed in any one of the preceding claims, **characterized** in that from the last lower fabric loop of the press section the web (W) is arranged to be transferred as a closed draw onto a drying wire (50) of a dryer section.
- 15 18. A press section as claimed in any one of the preceding claims, **characterized** in that in a smoothing nip provided with a counter roll without a fabric there is a large-sector press suction roll, whose sector begins before the nip and continues after it, on which the web is arranged to follow a press felt before the nip, while it passes through the nip and after it.